



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBW109-3101-58-2-3

Job Sheet 169516



Part No: RBW109-3101-58-2-3

Job Qty: 1 ea

Part Name: Hammer Head



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 12/13/17

Job Tracking No:

Due Date: 12/15/17

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RBW109-3101-58-2 Rev3 TEO17-641 IPP Rev A 17.12.12 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		12/14/17	0.00	0.00	Start Up Machining-4		Jh 17-12-16
120	Mori Seiki	1 pcs		12/15/17	0.00	1.00	MORI SL-154		Jh
130	QC	1 pcs		12/15/17	0.00	0.00	QC2 Machining-5		Jh
140	QC	1 pcs		12/15/17	0.00	0.00	QC8 Machining-5		DAG Fk 17-12-16
145	QC	1 pcs		12/15/17	0.00	0.00	QC5		03
150	Outsource	1 pcs		12/15/17			GRO002-VC AT 6001-V		03 18-1-12
160	Packaging	1 pcs		12/15/17	0.00	0.00	Packaging2		21 3-88
170	QC	1 pcs		12/15/17	0.00	0.00	QC6		21 3-88
180	Packaging	1 pcs		12/15/17	0.00	0.00	Packaging3 Large Fab		21 3-88
190	QC21-SA	1 Ea		12/15/17	0.00	0.00	QC21		21 3-88

Part Op 120 - 1-Machine as per folio FB63 FOLIO REV: _____ DWG REV: _____ 2-Debur

Descriptions: 150 - Issue P/O to ATG: _____ -ANODIZE COLOR CLEAR, PER IAW MIL-A-8625F TYPE 2 CLASS 1, Water sealant -Certificate of Conformity is required
180 - Identify and Stock

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	M6061T6R0.500	0	20	0	0

5014802

28

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS				
	Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐		

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
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Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification

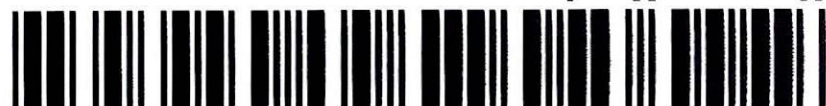
Job No: 169516
Mfg Date: 12/16/17

Start up Operation

Change No:
Operation:
Revision:
PART NO:

RBW109-3101-58-2-3

Hammer Head



S023591



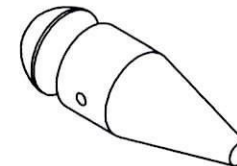
Dart Aerospace Ltd.
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Hawkesbury, ON K64 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Root Cause		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐
Design ☐	Operator ☐	Bending ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐
Material ☐	Use for Testing ☐	Cuffs ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐
Past Expiry Date ☐	Manufacturing Process ☐	
Misidentified ☐	Past Due ☐	OTHER : ☐

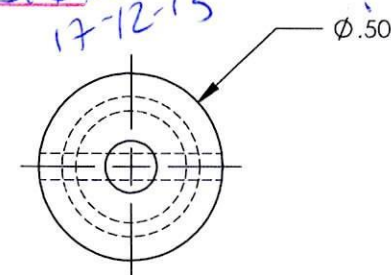
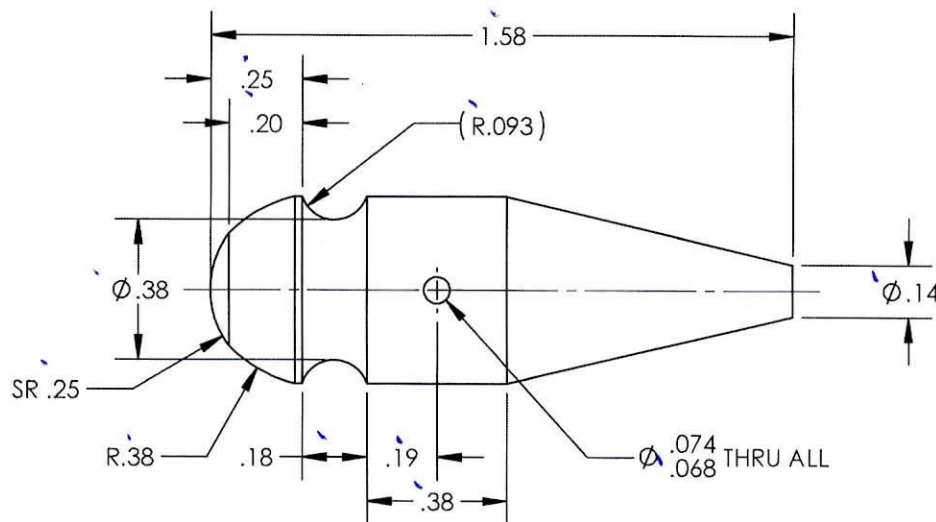
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REVISIONS			
REV	ECR	DESCRIPTION	DATE INITIAL APPROVED

TEO ATTACHED



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 169516 11-5
17-12-13



(-3)

HAMMER HEAD

DART AEROSPACE	
TITLE HAMMER, ALUMINUM, BLADE CORROSION AND VOIDS DETECTION	
DWG NO. RBW109-3101-58-2-3	REV 3
MAT'L 6061	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX $\pm$.005 FRACTIONS $\pm$ 1/8
FINISH CLEAR ANODIZE	.XX $\pm$.01 ANGLES $\pm$ 5°
SPEC MIL-A-8625F, TYPE II, CLASS I	.X $\pm$.1 SURFACES = 125/✓
DRAWN BY: DUERFELDT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: DUERFELDT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	AW109/AW119
SCALE 2:1	DATE 3/12/2015 SHEET 3 OF 5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	Pressure/Forced ☐	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	☐ Offset/Setup	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	☐ Supplier	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	☐ Training	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	☐ Use for Testing	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	☐ Poor Information	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	☐ Rushing	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	☐ Product Improvement	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	☐ Process Improvement	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						



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PURCHASE ORDER PO038682

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
27	168828	RBW6705G02631-3G-1	CLASS 1 WATER SEAL -Certificate of Conformity is required Lever Rigging Fork, T/R Actuator CLEAR ANODIZE (RED BARN) -Issue P/O to ATG: -ANODIZE COLOR CLEAR, PER IAW MIL-A-8625F TYPE 2 CLASS 1, Water sealant - Certificate of Conformity is required	Firmed	1/17/18	1 pcs	0 pcs	1 pcs	\$6.20/pcs	\$6.20
28	168800	RBW6505G00831-3G-23	Bar -Issue P/O to ATG: - ANODIZE COLOR CLEAR, PER IAW MIL-A-8625F TYPE 2 CLASS 1 WATER SEAL -Certificate of Conformity is required	Firmed	1/17/18	1 pcs	0 pcs	1 pcs	\$6.20/pcs	\$6.20
29	169448	RBW6505G00831-3G-25	Mount Plate -Issue P/O to ATG: -ANODIZE COLOR CLEAR, PER IAW MIL-A-8625F TYPE 2 CLASS 1, Water sealant -Certificate of Conformity is required	Firmed	1/17/18	1 pcs	0 pcs	1 pcs	\$6.20/pcs	\$6.20
30	169516	RBW109-3101-58-2-3	Hammer Head -Issue P/O to ATG: -ANODIZE COLOR CLEAR, PER IAW MIL-A-8625F TYPE 2 CLASS 1, Water sealant -Certificate of Conformity is required	Firmed	1/17/18	1 pcs	0 pcs	1 pcs	\$6.20/pcs	\$6.20
31	169327	RB T102103-5	Retainer -Issue P/O to ATG: - ANODIZE COLOR CLEAR, PER IAW MIL-A-8625F TYPE 2 CLASS 1 WATER SEAL -Certificate of Conformity is required	Firmed	1/17/18	2 pcs	0 pcs	2 pcs	\$6.20/pcs	\$12.40
32	169597	RB910-0002-9	Hose End -Issue P/O to ATG: -ANODIZE COLOR	Firmed	1/17/18	1 pcs	0 pcs	1 pcs	\$6.20/pcs	\$6.20



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 914404

Date: 11-Jan-18

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
3 ea	Part: RB910-0003-1 Quill Black Anodize per MIL-A-8625F, Type II, Class 2, .0004-.0010" (.4 - 1 mils), Water Sealant Job: 22206		Rev: 5 PO: PO038682 Line: 18
6 ea	Part: RBD29936 Tail Rotor Bungee Tool Black Anodize per MIL-A-8625F, Type II, Class 2, .0004-.0010" (.4 - 1 mils), Water Sealant Job: 22207		Rev: PO: PO038682 Line: 19
5 ea	Part: D2055 Clamp Black Anodize per MIL-A-8625F, Type II, Class 2, .0004-.0010" (.4 - 1 mils). Job: 22209		Rev: D PO: PO038682 Line: 21
1 ea	Part: RBW109-3101-58-2-3 Hammer Head Clear Anodize per MIL-A-8625F, Type II, Class 1, .0004-.0010" (.4 - 1 mils), Water Sealant Job: 22218		Rev: 3 PO: PO038682 Line: 30
3 ea	Part: RBT102103-5 Retainer Clear Anodize per MIL-A-8625F, Type II, Class 1, .0004-.0010" (.4 - 1 mils), Water Sealant Job: 22219		Rev: C PO: PO038682 Line: 31
2 ea	Part: RBT102103-3 Adapter Clear Anodize per MIL-A-8625F, Type II, Class 1, .0004-.0010" (.4 - 1 mils), Water		Rev: C Made in Canada.



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

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Fax: (613) 446-4556

Pack List

Number: 914404

Date: 11-Jan-18

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	Sealant Job: 22221	PO: PO038682	Line: 33
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>11/21/2018</u> Certified Signature: <u>[Signature]</u> Receiver Signature: <u>[Signature]</u> A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
Made in Canada.			